Wavelength range: **5 - 28 µm**

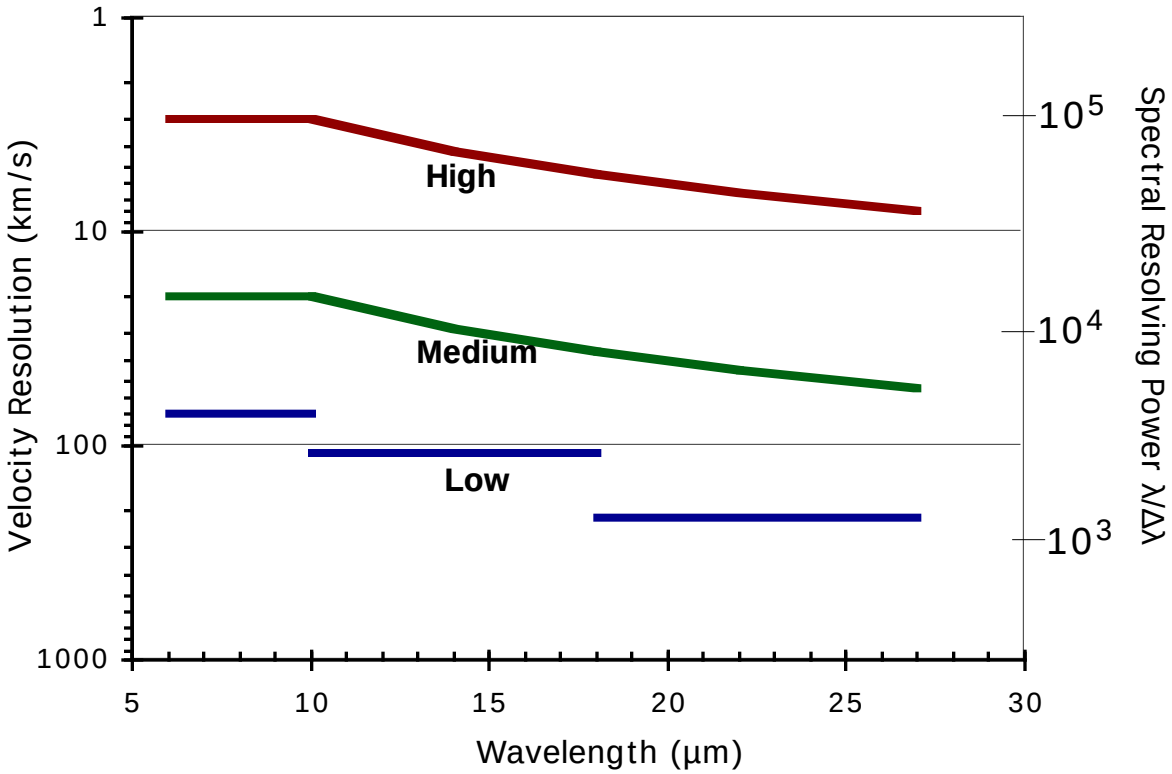
Three Resolving Powers:

High: ~ 10^5
Medium: ~ 10^4
Low: ~3000

The resolving power plotted corresponds to the FWHM of the instrument line spread function for a monochromatic line from a point source.

Wavelength changes require about 3 minutes.

Resolution change requires about 3 minutes.



Free spectral range :

High: 1500 km/sec (echelle mode)
Medium: 1500 km/sec
Low: 6000 km/sec

MDLF is the “minimum detectable line flux”, 4σ in 15 minutes (900 s) on-source integration time.

MDLF is plotted for an unresolved line from a point source, for the High resolution mode.

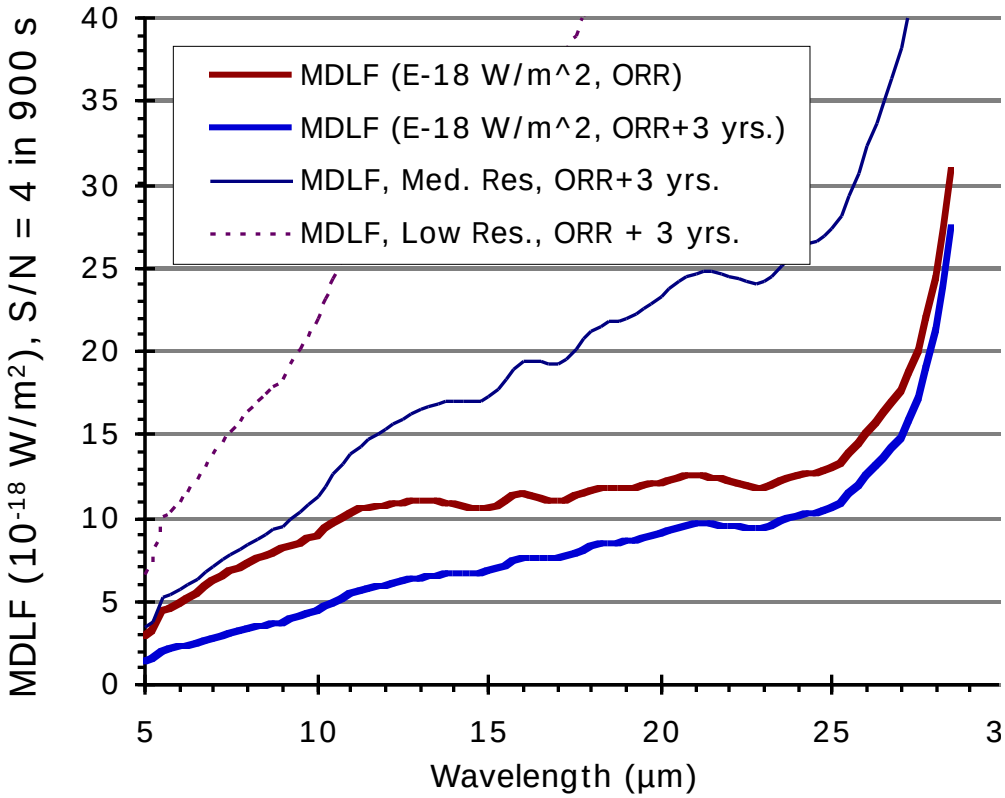
MDLF scales roughly as (S/N) /√ t
where t = net integration time

Minimum detectable continuum flux MDCF (4σ, 15 minutes):

	λ= 10 μm	20 μm
High:	~ 1.3 Jy	~ 2.7 Jy
Medium:	~ 0.4 Jy	~ 0.9 Jy
Low:	~ 0.2 Jy	~ 0.5 Jy

Calibration, setup, and target acquisition take less than 20 minutes.

Line measurements in bright continuum sources may take longer to reach the same (S/N).



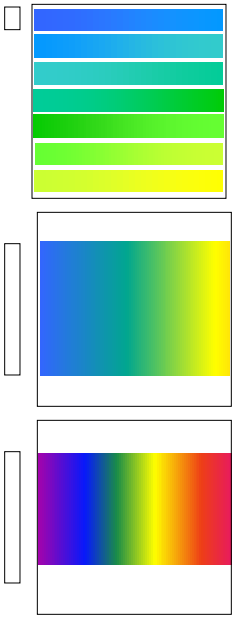
Atmospheric transmission may preclude measurements at some wavelengths and reduce sensitivity at others. Further details for particular wavelengths of interest are available from the SI team; see contact information on the title page.

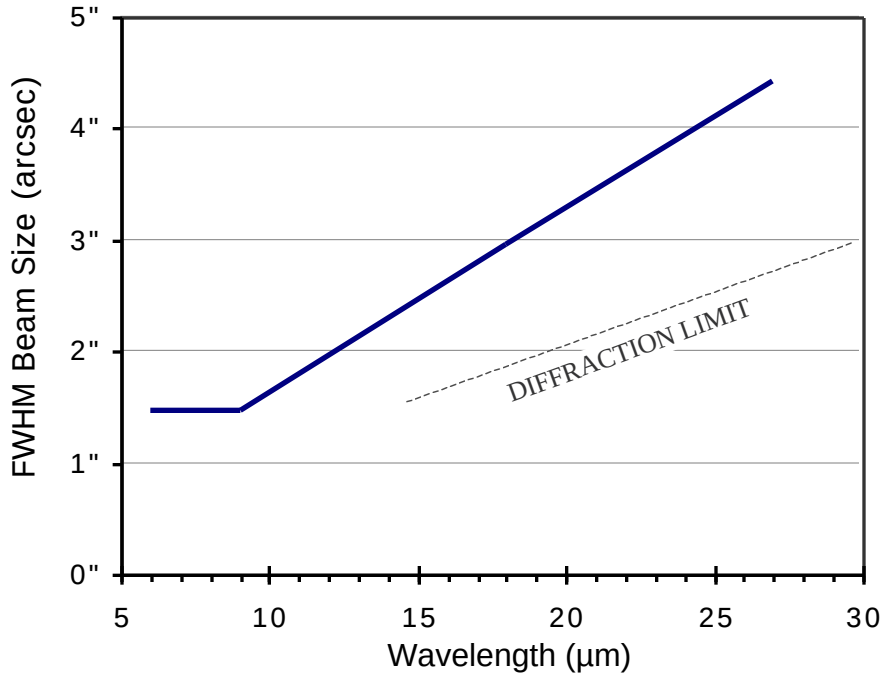
Beam size shown is the telescope + instrument FWHM for normal operation conditions.
Spatial resolution along the slit limited by telescope performance.

Slit width range = 1” – 4”; angular resolution shown is 1.6 x diffraction for λ > 9 μm.

Detector: 256 x 256 pixel array

Mode:	Format:	Slit Length
High:	cross-dispersed	5” – 20”
Medium:	single order	40” - 90”
Low:	single order	40” - 90”





Caveats:

(1) Nodding efficiency ranges from 30% (nodding off slit) to 80% (nodding on slit)

(2) Sensitivity assumes SOFIA is diffraction limited at λ > 15 μm

(3) Non-continuous spectral coverage in high-resolution mode for λ > 13 μm